Capsaicin 8% Patch in Urological patients with Neuropathic Pain

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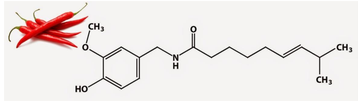
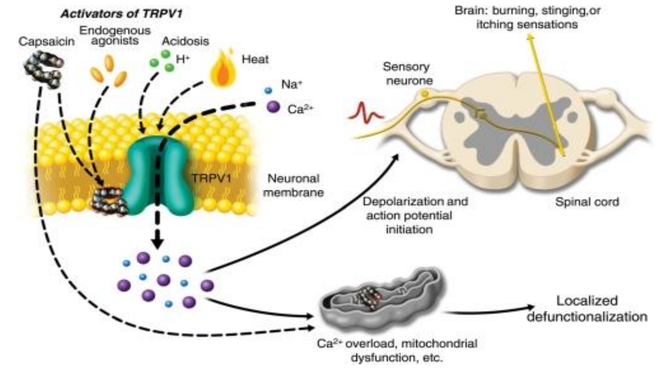
Background and Goal of study

Neuropathic pain (NP) is a kind of pain very difficult to control which incapacitates and limits the quality of life of the patient. It has has been defined as a "pain arising as a direct consequence of a lesion or disease affecting the somatosensory system". Capsaicin patch is a synthetic equivalent of the natural compound found in chili peppers. Capsaicin is a selective agonist for the transient receptor potential vanilloid (TRPV1) receptor residing on nociceptive peripheral nerve fibers. The effect of capsaicin is assumed to be mediated by a reversible defunctionalization of cutaneous nociceptors thereby, inhibiting the transmission of nociceptive signals after Post-surgical Neuralgia.





Patients and Methods

- An observational prospective study was carried out in patients (> 18 yrs) with neuropathic pain from March 2011 until January 2015.
- **Inclusion criteria** were patients with NP that received for several years pharmacological unsatisfactory multi-treatment due to scars after different urological surgeries**. Exclusion criteria** were patients with diabetic NP.
- Patients were treated with Capsaicin 8 % patch applied over the painful area. **DN4 questionnaire** was measured before and 15 days after treatment. **Numeric Pain Rating Scale (NPRS)** was evaluated before, the day after and 15 days after treatment.
- Prior to applying the patch, the area was cleaned, treated with 4% Lidocaine and left for an hour.
- Nitrile gloves and eye protective masks were used to prevent eye and skin irritation, because when the patch is applied some particles may come off.
- The Capsaicin patch was applied, trying to cover the whole painful surface, and was left to work for an hour. After that period the patch was removed and the area was cleaned.
- Results are shown in mean (± Standard Deviation) and percentages.

Results

Fourteen patients were analysed. Demographic data and the treated area are shown in table 1.

Table 1. Demographic characteristics and treated area

Age, mean (SD)	61.9 (11.6)
Gender (F/M), n (%)	12(80) / 2(20)
Pain site, n (%)	
Right lumbotomy	6 (42.9)
Left lumbotomy	5 (35.7)
Hypogastric	1 (7.1)
Right iliac fosse[1]	2 (14.3)

Table 2. Number of procedures per patient

N procedures	N patients	%
1	4	28.6
2	5	35.7
3	3	21.4
4	1	7.1
5	1	7.1

SD=Standard Deviation; M=Male; F=Female; [1] Kidney Transplantation

Fig 1. Evolution Numeric Pain Raiting Scale (NPRS)

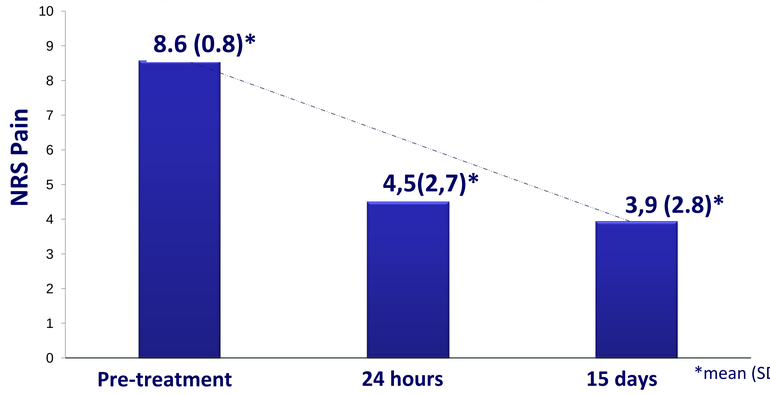
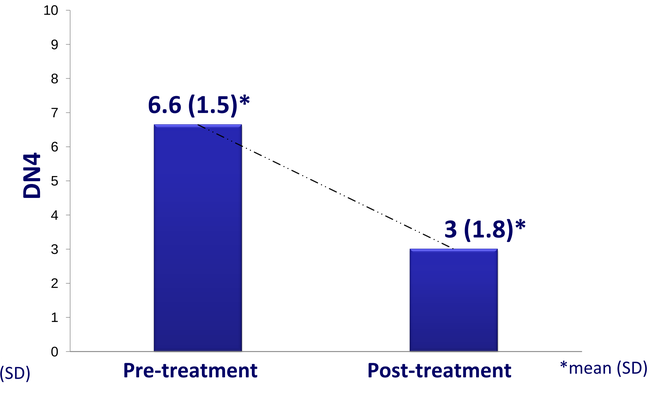


Fig 2. Evolution of DN4 Questionnaire



All patients felt minor discomfort like pruritus (72.7%) or burning sensation (36,4%) in the area where the patch was applied, and 27% of the patients got moderate erithema. No blood pressure alterations where found during the procedure. Only 1 patient had to be given analgesia during the procedure. According to DN4 questionnaire, all patients got improvement particulary with the electric-shocks and itching sensations. The time to retreatment between the first and second patch applications was 6.4 month, in average

Conclusions

Our small study confirms that capsaicin 8% patch provided immediate and extended neurophatic pain relief, without significant adverse effects. The dermal application system works directly over the painful area, is very easy to apply and well tolerated. The estimated effectiveness last longer than 24 weeks. The capsaicin patch gives an additional option for the management of peripheral neurophatic pain in post-surgical urological patients.

References: 1. Mou J et al. Clin J Pain. 2014; 30(4):286-94; **2**. Derry S et al. Cochrane Database Rev. 2013 Feb28 ;2:CD007393. doi: 10.1002/14651858.CD007393.pub3; **3**. Simpson DM et al. Clin J Pain. 2014; 30(2):134-42